

### ABSTRACT OF THE DISCLOSURE

A vibration control method of a stage apparatus having a main stage body that is driven over a base plate, which controls vibration by providing a force to the base plate. The position of a center of gravity and a position of a major inertia axis of the stage apparatus is detected when vibration is applied to the base plate, and the force is controlled based on the detected position of the center of gravity and the major inertia axis. As a result, in this vibration control method, force is controlled based on the actual position of the center of gravity and the major inertia axis, which is determined when vibration is applied to the base plate of actual equipment or by simulation rather than based on the position of the center of gravity and the major inertia axis in a design model. Hence, residual vibration of the base plate is effectively controlled.